MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2018/2019

MVR2033 – SIMULATION TECHNOLOGY

(All sections / Groups)

22 OCTOBER 2018
9.00 a.m. - 11.00 a.m.
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This Question paper consists of 3 pages with 7 questions only.

2. Answer **ONLY FIVE** out of SEVEN questions. All questions carry equal marks and the distribution of the marks for each question is given.

3. Please write all your answers in the Answer Booklet provided.

Total marks are 100 | Answer only 5 questions

QUESTION 1

a. Cybersickness is one of the obvious troublesome effects of virtual reality simulation on users. Define the term "Cybersickness" **[5 Marks]**

b. Mention any four of the main symptoms of "Cybersickness". **[10 Marks]**

c. What is the importance of user safety studies on Virtual Reality? **[5 Marks]**

QUESTION 2

a. What are the system characteristics that influence the user to have Cybersickness? (One of them is Poor resolution, mention 4 others) **[10 Marks]**

b. Please mention 4 information of Virtual Retinal Display (VRD) and what kind of people will be really helped by this VRD according to the research of Kleweno, Seibel, Viirre, Kelly, & Furness in 2001? **[10 Marks]**

QUESTION 3

a. What are the techniques to increase the engagement in games? And how to achieve that? **[10 Marks]**

b. Please mention 4 characteristics of the Educational Simulations (which is part of Immersive Learning Simulation)? **[10 Marks]**

QUESTION 4

a. Pedagogical / didactic generally surrounds a learning experience, ensuring that participants spend their time productively. Mention 5 of the pedagogical techniques beside the Replay option and the Bread Crumbs (indicators of where a participant has already been) **[10 Marks]**

b. Explain how the HTC Vive tracking sensor knows the user's position in the movement area? **[10 Marks]**

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QUESTION 5

a. Can 3D Interaction be done by the 3D input devices? Explain why? **[10 Marks]**

b. Mention 5 items of 3D input devices **[10 Marks]**

QUESTION 6

a. For Virtual Reality devices, what are the characteristics of "Properties of Visual Display"? The "Properties of Visual Display" can be divided into two, the Visual Presentation and the Logistic Properties. Mention 5 of the Visual Presentation and Logistic Properties. **[10 Marks]**

b. What is surround screen display? What are the advantages and disadvantages of having a surround screen display? Mention 3 for each advantage and disadvantage. **[10 Marks]**

QUESTION 7

a. What are the three I3 in Virtual Reality that is mentioned by Burdea (2003)? Explain them. **[5 Marks]**

b. Haptic comes from a Greek word, what is that? What is the meaning of the word: Haptic? **[10 Marks]**

c. What are the two types of Body-referenced Haptic Device? **[5 Marks]**

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